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THYRATRON

MERCURY-VAPOR TETRODE

Electrical:

DATA

Heater, for Unipotential Cathode:

Voltage*	5.5 [□]	5.0	volts
Current	5.0 [□]	4.5	amp

Direct Interelectrode Capacitance (Approx.):

Grid No.1 to Anode	0.2	μuf
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Peak Voltage Drop(Approx.)	16	volts
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Approx. Control Characteristics:

Anode Voltage	100	1000	volts
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Grid-No.2 Voltage	0	0	volts
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Grid-No.1 Voltage	+1	-9	volts
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Ionization Time(Approx.)	10	μseconds
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Deionization Time(Approx.)	1000	μseconds
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□ Applies only when this tube is used for ignitor firing.

Mechanical:

Mounting Position	Vertical, Base Down
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Overall Length	7-11/16" ± 1/4"
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Greatest Radius	2-1/4"
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Bulb	ST-23
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Caps.	Medium
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Base	Medium 4-Pin, Bayonet
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Maximum Ratings, Absolute Values:

PEAK FORWARD ANODE VOLTAGE	1000 max.	volts
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PEAK INVERSE ANODE VOLTAGE	1000 max.	volts
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GRID-No.1 (CONTROL-GRID) VOLTAGE:

Before Conduction	-1000 max.	volts
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During Conduction	-10 max.	volts
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GRID-No.2 (SHIELD-GRID) VOLTAGE:

Before Conduction	-300 max.	volts
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During Conduction	-5 max.	volts
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INSTANTANEOUS ANODE CURRENT:

Below 25 Cycles	5 max.	amp
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25 Cycles and Higher	30 max. [□]	15 max.	amp
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AVERAGE ANODE CURRENT**	0.5 max. [□]	2.5 max.	amp
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SURGE ANODE CURRENT for 0.1 sec., max.	200 max.	amp
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INSTANTANEOUS GRID-No.1 Current	1.0 max.	amp
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AVERAGE GRID-No.1 CURRENT**	0.25 max.	amp
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INSTANTANEOUS GRID-No.2 CURRENT	1.0 max.	amp
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AVERAGE GRID-No.2 CURRENT**	0.25 max.	amp
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COND.-MERCURY TEMPERATURE RANGE [▲]	40 - 80	°C
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* Heater voltage must be applied at least 5 minutes before anode voltage is applied.

** Averaged over any 15-second interval.

▲ Recommended condensed-mercury temperature 40°C.

□ Applies only when this tube is used for ignitor firing.

MAY 1, 1946

TUBE DIVISION

TENTATIVE DATA

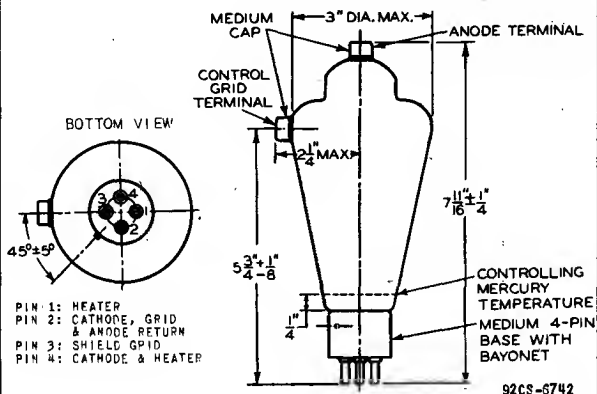
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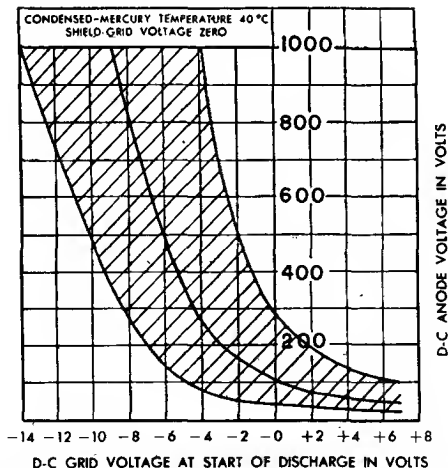


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THYRATRON



OPERATIONAL REGION OF CRITICAL GRID VOLTAGE



MAY 1, 1946

 TUBE DIVISION
 RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-6742-6705



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THYRATRON

MERCURY-VAPOR TETRODE

DATA**Electrical:**

Heater, for Unipotential Cathode:

Voltage.	5.5 [□]	5.0	volts
Current.	5.0 [□]	4.5	amp

Cathode:

Minimum Heating Time, prior to tube conduction	5	minutes
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Direct Interelectrode Capacitances (Approx.):

Grid No.1 to Anode	0.2	μf
Grid No.1 to Cathode	4.4	μf ←

Ionization Time (Approx.)	10	μsec
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Deionization Time (Approx.)	1000	μsec
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Anode Voltage Drop (Approx.)	16	volts
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Grid-No.1 Control Ratio (Approx.) with grid-No.1 resistor (ohms) = 0; grid-No.1 and grid-No.2 volts = 0	170	←
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Grid-No.2 Control Ratio (Approx.) with grid-No.1 resistor (ohms) = 0; grid-No.1 and grid-No.2 volts = 0	300	←
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Mechanical:

Mounting Position.	Vertical, Base Down
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Overall Length	7-11/16" ± 1/4"	←
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Seated Length.	7-1/16" ± 1/4"	←
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Greatest Radius.	2-1/4"	←
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Bulb	ST-23
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Caps (Two)	Medium
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Base	Medium-Shell Small 4-Pin, Bayonet
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Basing Designation for BOTTOM VIEW	4CD
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Pin 1-Heater

Pin 2-Cathode;

Circuit

Returns

Pin 3-Grid No.2

Pin 4-Heater,
Cathode

Top Cap - Anode

Side Cap - Grid No.1

Maximum Ratings, Absolute Values:**PEAK ANODE VOLTAGE:**

Forward.	1000 max.	volts
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Inverse.	1000 max.	volts
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GRID-NO.2 (SHIELD-GRID) VOLTAGE:

Before Conduction.	-300 max.	volts
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During Conduction.	-5 max.	volts
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GRID-NO.1 (CONTROL-GRID) VOLTAGE:

Before Conduction.	-1000 max.	volts
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During Conduction.	-10 max.	volts ←
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CATHODE CURRENT:

Peak	30 max. [□]	15 max.	amp
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Average**	0.5 max. [□]	2.5 max.	amp
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Fault, for 0.1 sec. maximum.	200 max.	amp
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□ **. See next page.

← Indicates a change.

MARCH 1, 1951

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GRID-No. 2 CURRENT:

Average** 0.25 max. amp

GRID No. 1 CURRENT:

Average** 0.25 max. amp

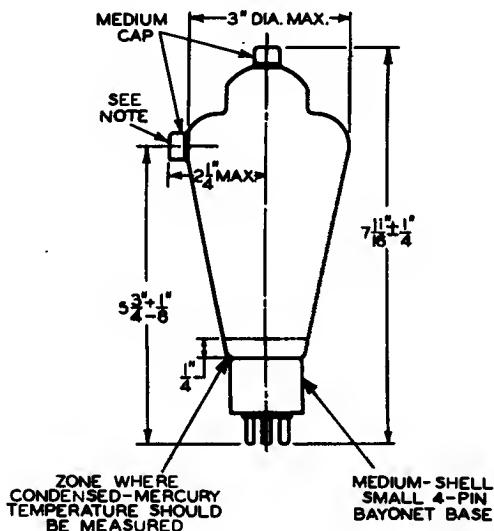
COND.-MERCURY TEMPERATURE RANGE[▲] +40 to +80 °C

OPERATING FREQUENCY. 150 max. cps

□ Applies when this tube is used for igniter firing.

** Averaged over any interval of 15 sec. max.

▲ Recommended operating temperature is 40°C.



92CS-6742RI

NOTE: THE PLANE THROUGH TUBE AXIS AND CENTER OF GRID-No. 1 CAP IS $45^\circ \pm 5^\circ$ FROM THE PLANE THROUGH THE TUBE AXIS AND CENTER OF BAYONET PIN. GRID-No. 2 CAP IS ON SAME SIDE AS PIN No. 3.

TEMPERATURE-RISE CHARACTERISTIC of the 5560
is the same as that shown for Type 5559

MARCH 1, 1951

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DATA



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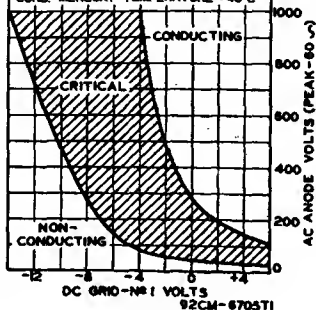
THYRATRON

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OPERATIONAL RANGE
OF CRITICAL GRID VOLTAGE

TYPE 5560

RANGE IS FOR CONDITIONS WHERE:
 $E_f = 5$ VOLTS AC $\pm 5\%$; GRID-#2 (SHIELD)
 VOLTS = 0; CIRCUIT RETURNS TO PIN #2.
 THE RANGE INCLUDES INITIAL AND
 LIFE VARIATIONS OF INDIVIDUAL TUBES,
 AS WELL AS CHANGE IN CHARACTERIS-
 TICS DUE TO HEATER PHASING.
 GRID-#1 RESISTOR (OHMS) = 0
 COND.-MERCURY TEMPERATURE = 40°C

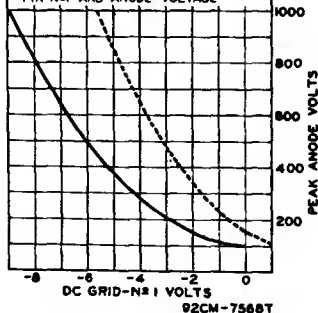
SHIFT OF AVERAGE
CONTROL CHARACTERISTIC
WITH CHANGE IN HEATER PHASING

TYPE 5560

$E_f = 5$ VOLTS AC
 GRID-#2 (SHIELD) VOLTS = 0
 CONDENSED-MERCURY TEMPERATURE = 40°C
 GRID-#1 RESISTOR (OHMS) = 0

CURVE	PHASE ANGLE DEGREES $^\circ$	CIRCUIT RETURN
—	180°	PIN #2
- - -	0	PIN #2

* BETWEEN HEATER VOLTAGE AT
 PIN #1 AND ANODE VOLTAGE



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AVERAGE GRID CHARACTERISTICS
BEFORE ANODE CONDUCTION

TYPE 5560
 $E_p = 5$ VOLTS AC
 GRID-N#2 (SHIELD) VOLTS = 0
 GRID-N#1 RESISTOR (OHMS) = 0
 CIRCUIT RETURNS TO PIN N#2
 COND.-MERCURY TEMPERATURE = 80°C

0 = CONDUCTION STARTS

OC ANODE VOLTS = 100
500
1000
2000

DC GRID-N#1 MICROAMPERES

OC GRID-N#1 VOLTS

92CM-7556T

AVERAGE GRID CHARACTERISTICS
DURING ANODE CONDUCTION

TYPE 5560
 $E_p = 5$ VOLTS AC
 GRID-N#2 (SHIELD) VOLTS = 0
 GRID-N#1 RESISTOR (OHMS) = 0
 CIRCUIT RETURNS TO PIN N#2
 CONDENSED-MERCURY TEMPERATURE = 80°C

OC ANODE AMP. = 1.25
2.5

DC GRID-N#1 MILLIAMPERES

DC GRID-N#1 VOLTS

92CM-7570T

MARCH 1, 1951

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CE-7556T-7570T